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ABSTRACT

During 1983-84, the Public Law 89-313 program served 2,053 students who were formerly educated in State-operated or State-supported schools through the following components and subcomponents: the Regional Services Instructional Support Unit; Citywide Services, consisting of Instructional Supplies and Equipment and Hearing Education Services; and the High School Outreach Program, including the Placement and Referral Center for the Handicapped. Analyses of pupil achievement data indicated that attainment of program objectives varied. However, nearly all students served by the program demonstrated positive growth in at least one of the following: communication, reading, mathematics, sensory and motor development, self-help and societal/community living skills, and vocational competencies. In addition, observations and interviews indicated that, for the most part, program services met the individual needs of the students and effectively supplemented basic instructional activities. In 1983-84, the program showed favorable results in terms of number of pupils served, activities, and objectives mastered, as compared to previous years. However, all components and subcomponents suffered some delays in implementation and fewer students were served than were eligible due to high student transiency. Recommendations address these and other problems. (GC)

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P.L. 89-313
SUPPLEMENTARY SERVICES FOR
PREVIOUSLY NONPUBLIC SCHOOL
INSTITUTIONALIZED STUDENTS
1983-84

OEE Evaluation Report

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O.E.E. EVALUATION REPORT

August, 1984

P.L. 89-313
SUPPLEMENTARY SERVICES FOR
PREVIOUSLY NONPUBLIC SCHOOL
INSTITUTIONALIZED STUDENTS
1983-84

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SUMMARY OF THE REPORT

During 1983-84, the Public Law 89-313 program, Supplementary Services for Previously Nonpublic-School Institutionalized Students, served 2,053 students who were formerly educated in state-operated or supported schools, through the following components and subcomponents:

Component 1.0. Regional Services Instructional Support Unit

Component 2.0. Citywide Services

--Subcomponent 2.1. Instructional Supplies and Equipment
--Subcomponent 2.2. Hearing Education Services

Component 3.0. High School Outreach Program

--Subcomponent 3.1. High School Outreach Program
--Subcomponent 3.2. Placement and Referral Center for the Handicapped

Analyses of pupil achievement data indicated that attainment of program objectives varied; some were met, most were partially met, and a few were unmet. However, nearly all students served by the program demonstrated positive growth in at least one of the following: communication, reading, mathematics, sensory and motor development, self-help and societal/community living skills, and vocational competencies. On the average, students mastered about eight new skills each. In addition, observations and interviews indicated that, for the most part, program services met the individual needs of the students and effectively supplemented basic instructional activities.

In comparison with the 1982-83 cycle, the 1983-84 program served approximately twice as many students and provided more than two and one-half times as much supplementary materials and equipment. Approximately the same number of staff were involved in both cycles. In keeping with recommendations from the evaluation of the previous cycle, most of these were teacher trainers whose primary responsibilities were to provide consultations, in-class demonstrations, and workshops in the selection and effective use of program-purchased materials and equipment for individualization of instruction.

Four of the components and subcomponents of the 1982-83 program cycle were replicated during 1983-84, allowing some direct comparisons between cycles. Component 1.0, Regional Instructional Support Unit, served 776 students in the current cycle, nearly twice the number served last year. This year, the component increased its emphasis on career education and broadened its focus on academics. Overall, mean student mastery increased substantially, from 3.1 skills per student last year to 12.1 this year.

Subcomponent 2.1, Citywide Services Instructional Supplies and Equipment, served almost twice as many students as last year and provided almost two and one-half times the amount of materials. Special emphasis was given to vocational equipment (i.e., appliances and office machines). As in the previous cycle, this year's program only partially attained its objective; however, mean number of objectives mastered increased from an average of 2.7 in 1982-83 to an average of 4.1 in the current year.

The current replication of Subcomponent 2.2, Hearing Education Services, differed from the previous cycle by expanding the use of amplification devices to general education, as well as special education, classrooms. Although effective at the elementary level in both cycles, the current program encountered strong student resistance at the middle and high school level.

Finally, Subcomponent 3.2., Placement and Referral Center for the Handicapped, was a replication of a highly effective program component. As in the past, this subcomponent provided supervised work experience and pre-vocational skills training and has continued to exceed its pupil achievement objective.

All components and subcomponents suffered some delays in implementation. In addition, although program-eligible students were identified before the beginning of the program cycle, high student transiency hampered efforts to locate and serve some students.

The conclusions drawn from the findings of this evaluatior lead to the following recommendations:

- To ensure that services are provided in a timely manner, efforts should continue to gain early program approval and delivery of supplies.
- To ensure rapport with school staff, disseminate information, and optimize implementation, the program should continue to strengthen field contacts and site visits.
- To ensure the best match between student needs and program services, program coordinators and teacher trainers should continue to request input from school-based personnel.
- Where the focus of program activities is on providing supplementary materials or equipment, efforts to involve parents and elicit pupil attitudes and interests should be expanded.
- Efforts should be strengthened to maintain and increase high school students' attendance. When possible, teacher-trainer caseloads should be equalized and reduced to a more manageable level. In addition, greater parent involvement should also be encouraged.

TABLE OF CONTENTS

		Page
	LIST OF TABLES	iv
I.	INTRODUCTION	1
II.	OVERALL LEVEL OF IMPLEMENTATION	3
III.	EVALUATION OF PROGRAM COMPONENTS	6
	COMPONENT 1.0 REGIONAL SERVICES INSTRUCTIONAL SUPPORT UNIT	6
	SUBCOMPONENT 2.1 CITYWIDE SERVICES INSTRUCTIONAL SUPPLIES AND EQUIPMENT	21
	SUBCOMPONENT 2.2 HEARING EDUCATION SERVICES	28
	SUBCOMPONENT 3.1 HIGH SCHOOL OUTREACH PROGRAM	35
	SUBCOMPONENT 3.2 PLACEMENT AND REFERRAL CENTER FOR THE HANDICAPPED	40
IV.	CONCLUSIONS AND RECOMMENDATIONS	49

LIST OF TABLES

Page

Table 1

Numbers and Relative Percentages of Students who Received Materials and Training by Curriculum Area (Component 1.0) 10

Table 2

Frequency Distribution of Mastery of B.C.P. Objectives by All Component 1.0 Students 13

Table 3

Frequency Distribution of Mastery of B.C.P. Objectives by Component 1.0 Students in Elementary Schools. 14

Table 4

Frequency Distribution of Mastery of B.C.P. Objectives by Component 1.0 Students in Middle Schools. 15

Table 5

Percentage of Students Meeting Criteria For Career Education Objectives by Attendance Blocks (Component 1.0) 17

Table 6

Percentage of Students Meeting Criteria for Reading Objective by Attendance Blocks for Elementary and Middle School Students . . 18

Table 7

Percentage of Students Meeting Criteria for Mathematics Objective by Attendance Blocks for All Students (Component 1.0) 19

Table 8

Frequency Distribution of Total Objectives Mastered Across Instructional Areas for All Program Students (Component 1.0). . 21

Table 9

Numbers and Relative Percentages of Materials/Equipment Purchased for Citywide Services (Subcomponent 2.1) 24

LIST OF TABLES (cont'd)

Page

Table 10

Frequency Distribution of Mastery of B.C.P., Track IV InDepth, and Career Education/Pre-Vocational Skills Objectives (Subcomponent 2.1). 27

Table 11

Frequency Distribution of Number of Track IV InDepth Objectives Mastered (Subcomponent 2.23). 34

Table 12

Number of Schools and Students Served by P.L. 89-313 High School Outreach Program. 36

Table 13

Frequency Distribution of Number of Courses passed in Subjects Supported by Teacher Trainers (Subcomponent 3.1). 41

Table 14

Frequency Distribution of Mastery of Job Interviewing Skills as Measured by the Adkins Life Skills Interview Rating Scale . . . 48

I. INTRODUCTION

This report presents an evaluation of the 1983-84 Public Law 89-313 program entitled Supplementary Services for Previously Nonpublic-School Institutionalized Students. This program, operated by the New York City Public Schools' Division of Special Education (D.S.E.) under an entitlement grant, was designed to assist students formerly educated in state-operated or -supported schools. Program services were developed to supplement the basic instructional program in meeting the particular needs of these pupils as specified in their individualized educational plans (I.E.P.) and in accordance with such factors as unique learning style and functional skill level.

The program was comprised of three components and four subcomponents identified below:

Component 1.0. Regional Services Instructional Support Unit

Component 2.0. Citywide Services

- -- Subcomponent 2.1. Instructional Supplies and Equipment
- -- Subcomponent 2.2. Hearing Education Services

Component 3.0. High Schools

- -- Subcomponent 3.1. High School Outreach Program
- -- Subcomponent 3.2. Placement and Referral Center for the Handicapped

Component 1.0 served P.L. 89-313 students in self-contained classes and resource rooms in community schools; Component 2.0 served eligible students in special schools and low-incidence programs operated by D.S.E.'s Office of Citywide Programs; and Component 3.0 served P.L. 89-313 students in high schools.

The program was evaluated by the Office of Educational Evaluation (O.E.E.) through the collection and analysis of quantitative data on pupil achievement and qualitative data on program implementation. Data on pupil achievement were collected on O.E.E.-developed data retrieval forms and included information from a variety of sources (i.e., achievement tests, teacher questionnaires, attendance records, course grades, and direct pupil observations). Estimates of the numbers of students served were based on the numbers of data-retrieval forms submitted to O.E.E. Implementation data were gathered by O.E.E. field consultants during 116 site visits (approximately one-third of all program sites) in which they conducted more than 400 classroom observations and staff interviews. Program records of staff development activities were also reviewed. Site selection was random but stratified so that the sample was representative of the program subcomponents and students served.

Findings of this report are delineated in four chapters: Chapter II documents the overall level of program implementation focussing on facilities, staff, and levels of service provided; Chapter III presents an analysis of the qualitative and achievement data for each component with a focus on activities, materials, inhibiting factors, promising activities, and attainment of objectives; Chapter IV describes major conclusions, comparison with findings of evaluations of previous program cycles, and recommendations based on the results of the evaluation. In most sections of this report, the subcomponents are referred to by their numerical designation.

II. OVERALL LEVEL OF IMPLEMENTATION

This chapter describes the general level of program implementation across all three components in relation to that which was proposed. In total, the program served 2,091 students at 338 sites. Of these students, approximately one-quarter each were multiply-handicapped, mentally retarded, and emotionally handicapped, with the remainder distributed among the following disabilities: hard of hearing, learning disabled, orthopedically handicapped, speech impaired, and partially sighted.

FACILITIES

The program served students in community elementary and junior high schools, high schools, a special school for the deaf, special education schools, and approved work-sites. O.E.E. observations revealed that these settings were appropriate for instruction: classrooms were well- lit, furnishings were designed to accommodate students' special needs, and instructional areas were large enough for a variety of teaching activities. The facilities at the Placement and Referral Center (Subcomponent 3.2) were notably superior, with space organized to facilitate a variety of education and training activities that were conducted individually, in small groups, and in full classes. The circular arrangement of rooms, which allowed easy access, and bright lighting created a cheerful work atmosphere.

STAFF

Program staff consisted of 24 highly experienced, certified special education instructors chosen on the basis of individual expertise as indicated by background and supervisory recommendations. Interviews revealed

that participation in the orientation and pre-program activities were more than sufficient to meet their training needs.

LEVEL OF SERVICE

The program supplemented instruction for the target students by providing staff or instructional supplies and equipment designed to assist their adaptation to the public school special education program. Component 1.0 (Instructional Support Unit) provided instructional supplies and teacher trainers for staff development; Subcomponent 2.1 (Instructional Supplies and Equipment) and Subcomponent 2.2 (Hearing Education Services) provided training, materials, instructional supplies, and equipment to enhance the education of eligible hearing handicapped students; Subcomponent 3.1 (High School Outreach Program) provided support to improve student attendance and course performance; and Subcomponent 3.2 (Placement and Referral Center for the Handicapped) provided a special education vocational instructor and materials to promote the occupational development of selected eligible high school students.

The actual level of service varied among the components. Component 1.0 and Subcomponent 3.1 were fully implemented and provided the complete range of proposed activities; however, some students were not served until the end of the fall semester. Subcomponent 3.2 provided support for some students as early as September but did not implement their full program until March, 1984. Component 2.0 experienced severe delays in the acquisition of materials, supplies, and equipment and was unable to serve all target students. Specifically, Subcomponent 2.1 identified and located 89 percent of the

p posed eligible population of 1,258 students and provided materials or equipment for 89 percent of those located. Materials and equipment for Subcomponent 2.2 arrived during the spring semester. However, although instructional time was substantially truncated, staff and program participants reported that most program aspects were effectively implemented.

III. EVALUATION OF PROGRAM COMPONENTS

This chapter presents the evaluation findings for the individual components and subcomponents of the P.L. 89-313 project. Findings on program implementation are presented with respect to activities, materials and equipment, promising activities, and inhibiting factors; findings on the attainment of objectives for each subcomponent are based on the analyses of pupil achievement data.

Findings on the Regional Services Component 1.0 (Instructional Support Unit) are presented first. These activities were administered by D.S.E. through the direction of the deputy assistant superintendent for special education in each region. The Citywide Services Subcomponents, 2.1 and 2.2, which are presented next, were administered by D.S.E. under the direction of the Office of Citywide Programs with the assistance of a program-funded teacher-coordinator. The High School Subcomponents, 3.1 and 3.2, which are presented last, were administered by the Division of High Schools under the direction of the Career Education Coordinator for Special Education in the High Schools.

COMPONENT 1.0. REGIONAL SERVICES INSTRUCTIONAL SUPPORT UNIT

Activities

Component 1.0 provided instructional materials and supplies and staff development to supplement the regular educational program of 776 students at 180 community schools throughout the six D.S.E. regions. Nearly two-thirds (65 percent) attended elementary schools and about one-third (35 percent)

one-third (35 percent) attended intermediate or junior high schools. Students' ages ranged from five to 21 years and averaged 11 years. Handicapping conditions included mental retardation (37 percent), emotional handicap (21 percent), neurological impairment or learning disabilities (18 percent), and orthopedic impairment (12 percent); the remainder (12 percent) showed a variety of other handicaps including multiple handicap and speech impairment.

Program staff were teacher trainers assigned to the six D.S.E. regional offices. Initially, two trainers were assigned to each region, except Queens which had three and Staten Island which had one. In May, one teacher trainer was added in Manhattan and one in Brooklyn West. Teacher trainers began contacting classroom teachers in September; by November, nearly 70 percent of the initial contacts were made, and almost all students (95 percent) were being served. The frequency of site visits was based on observed needs, classroom teacher requests, and special education site supervisor recommendations. Trainers visited most sites a minimum of one to three times per semester; approximately a third were visited four or more times each term.

As documented by O.E.E., the program was implemented as follows. First, teacher trainers located program-eligible students and contacted their classroom teachers to identify the supplemental instructional training or materials required to meet the students' special needs.

In most cases, following consultation with the classroom teacher or special education supervisor, the teacher trainers selected materials appropriate to the educational objectives stated in each student's I.E.P. and arranged for the materials to be made available to the classroom teacher

either permanently or on long-term loan. In addition, upon request, the teacher trainers provided staff training to the students' classroom teachers. Finally, program staff made site visits to maintain records of program-supported materials and ascertain their perceived usefulness in meeting students' I.E.P. objectives.

Teacher trainers focused on either selecting and obtaining instructional materials and supplies to supplement the individual programs of eligible students or on training classroom teachers. Trainers provided 3,150 hours of training divided among individual classroom teacher consultations (65 percent), in-class demonstration lessons (23 percent), and group materials workshops (12 percent).

Training addressed specific academic areas as well as general instructional issues: over one-half (56 percent) of their sessions were devoted to use of materials and equipment, instructional paradigms, and assessing student progress; other sessions covered setting instructional goals, lesson planning, and record keeping. Curriculum areas covered included: communication and language development, independent living skills, sensory and motor development, readiness, reading, and math.

Materials/Equipment

According to interviews with 86 classroom teachers at 44 sites serving 252 program students, 61 percent of the teachers were consulted concerning the ordering of program materials. On the other hand, nearly all teachers reported receiving program materials; about two-thirds received materials in the fall and one-third in the spring semester. Classroom teachers reported

that particularly useful materials included Science Research Associates' reading and math kits, Developmental Learning Materials instructional aids, cassette tape recorders, and student manipulatives.

Information on the materials provided to teachers of program students, recorded on individual student data retrieval forms, indicated that teachers of 95 percent of the participants received some materials and 88 percent received two or more items. Teachers of almost 70 percent of the students received reading materials and teachers of 72 percent received mathematics materials; other items received in large supply included materials for career education (36 percent). (See Table 1 for a listing of all services, including materials and training, received by teachers of program students.)

Promising Activities

The particular strength of Component 1.0 was the provision of specific supplementary materials and effective demonstration of their use, which together contributed to individualization of instruction in the least restrictive environment for program-eligible students. Classroom teachers reported observable student gains in the areas of academics, social-interactions, and personal self-esteem. Similarly, school principals (N = 40) noted that the program had a positive impact upon the target population and attributed program success to a more timely delivery of materials (as compared to the previous cycle, 1982-83), a good match between student needs and materials received, and effective communication between classroom teachers and program staff.

Table 1

Numbers and Relative Percentages of Students Who Received Materials and Training by Curriculum Area (Component 1.0) (N = 776 Students)

Curriculum Area	Type of Service		
	Materials (Percent)	Training (Percent)	Total (Percent)
Reading	539 (69.4)	82 (10.5)	621 (80.0)
Mathematics	556 (71.6)	97 (12.5)	653 (84.1)
Life Skills	125 (16.1)	7 (1.0)	132 (17.0)
Career Education	281 (36.2)	80 (10.3)	361 (46.5)
Other	250 (32.2)	334 (43.0)	584 (75.2)

Note. The column entries represent the numbers and percentages of students receiving materials, training, and either materials or training, respectively.

- Materials were most often provided to students for academic (reading and mathematics) instruction.
- Training focussed on diverse curriculum areas.

Inhibiting Factors

Three major problems prevented optimal implementation of Component 1.0: delays in the delivery of instructional materials by New York City Public Schools' Bureau of Supplies; relative inaccessibility of some regional resource libraries, thereby limiting the quantity and variety of materials available for distribution; and limited teacher input into the selection of materials for some target students.

Achievement Data

Teachers used up to four criterion-referenced tests to report student mastery of I.E.P. skills in response to instruction supplemented with program-purchased materials and training. Ongoing administration of the criterion-referenced Behavioral Characteristics Progression (B.C.P.) measured progress in the following areas: personal hygiene and health care (Strands 1-10); perceptual motor development (Strands 11-17); communication and language (Strands 18-22 and 46); affective behavior (Strands 23-33); academics (Strands 34-38); and social/survival skills (Strands 42-45). Student achievement in career education was measured by the criterion-referenced Career Education Prevocational Skills Assessment Inventory, in reading by the Individualized Criterion Referenced Testing (I.C.R.T.) and in math by the Comprehensive Instructional Management System (C.I.M.S.). Data retrieval forms were designed to record a maximum of 12 I.E.P. objectives in each area.

The criteria for attainment of the program's objective varied according to the instructional area and were as follows.

- Communication/Language Development, Social/Survival Skills, Reduction in Maladaptive Behavior - Eighty percent of the participating students will master three or more short-term objectives and 50 percent will master six or more.

- Career Education - Ninety percent of the participating students will master one or more short-term objectives for every 20 sessions attended and 50 percent will master three or more short-term objectives for every 20 sessions attended.

- Reading and Mathematics - Seventy-five percent of the participating students will master two or more short-term objectives for every 20 sessions attended and 25 percent will master four or more objectives for every 20 sessions attended.

To determine whether the objective for student growth in communication/language development, social/survival skills, and changes in maladaptive behaviors was attained, a frequency distribution of students' mastery of B.C.P. objectives was prepared. The data, which are presented in Table 2, indicated that 69 percent of all Component 1.0 students who were assessed on the B.C.P. mastered three or more objectives and 46 percent mastered six or more objectives. Thus, the objective was not attained; that is, less than 80 percent mastered three or more objectives and less than 50 percent mastered at least six.

To examine the effect of school level on the mastery of B.C.P. objectives, separate frequency distributions were prepared for elementary and middle schools. (See Tables 3 and 4.) Nearly 75 percent of the elementary-school students mastered at least three objectives and 51 percent mastered at least six; the percentages for middle-school students were 37 percent and 20 percent, respectively. Thus, the elementary school sample demonstrated substantially more mastery than their middle school counterparts. Indeed,

Table 2

Frequency Distribution of Mastery
of B.C.P. Objectives[a] by Component 1.0 Students

Number of Skills Mastered	Number of Students	Percent of Population[b]	Cumulative Percent
12	26	8.4	8.4
11	15	4.8	13.2
10	16	5.1	18.3
9	23	7.4	25.7
8	21	6.8	32.5
7	19	6.1	38.6
6	24	7.7	46.3
5	14	4.5	50.8
4	20	6.4	57.2
3	35	11.3	68.5
2	33	10.6	79.1
1	35	11.3	90.4
0	30	9.6	100.0
	311		

[a]B.C.P. strands used were personal hygiene and health care, perceptual-motor development, communication and language, affective behavior, academics, and social/survival skills.

[b]Percentage of Component 1.0 students for whom B.C.P. data were reported.

- Sixty-nine percent of all Component 1.0 students assessed on the B.C.P. mastered at least three new B.C.P. objectives and 46 percent mastered at least six. Accordingly, the component objective was partially met.

Table 3

Frequency Distribution of Mastery
of B.C.P. Objectives[a] by Component 1.0 Students
in Elementary Schools

Number of Skills Mastered	Number of Students	Percent of Population[b]	Cumulative Percent
12	26	9.9	9.9
11	15	5.7	15.6
10	16	6.1	21.7
9	22	8.4	30.1
8	19	7.3	37.4
7	17	6.5	43.9
6	19	7.3	51.2
5	14	5.3	56.5
4	19	7.3	63.8
3	28	10.7	74.5
2	24	9.2	83.7
1	27	10.3	94.0
0	16	6.1	100.1[c]
	262		

[a]B.C.P. strands used were personal hygiene and health care, perceptual-motor development, communication and language, affective behavior, academics, and social/survival skills.

[b]Percentage of Component 1.0 elementary students for whom B.C.P. data were reported.

[c]Does not total 100 percent due to rounding.

- Nearly three-fourths of the elementary school students mastered at least three short-term instructional objectives; over one-half mastered six or more.

Table 4

Frequency Distribution of Mastery of B.C.P. Objectives[a] by Component 1.0 Students in Middle Schools

Number of Skills Mastered	Number of Students	Percent of Population[b]	Cumulative Percent
9	1	2.0	2.0
8	2	4.1	6.1
7	2	4.1	10.2
6	5	10.2	20.4
4	1	2.0	22.4
3	7	14.3	36.7
2	9	18.4	55.1
1	8	16.3	71.4
0	14	28.6	100.0
	49		

[a]B.C.P. strands used were personal hygiene and health care, perceptual-motor development, communication and language, affective behavior, academics, and social/survival skills.

[b]Percentage of Component 1.0 middle school students for whom B.C.P. data were reported.

- Thirty-seven percent of the middle school students mastered at least three short-term instructional objectives and 20 percent mastered six or more.

the former partially attained the program objective.

To determine whether the objective for student achievement of career education skills was attained, a frequency distribution was prepared of the percentage of students meeting the objective criteria, broken down by 20-session attendance blocks. The data, which are presented in Table 5, indicated that overall 90 percent of the students mastered a minimum of one skill for every 20 sessions attended and 33 percent mastered three or more skills for every 20 sessions attended; accordingly, the program objective was partially attained.

To determine whether the objectives for student reading and mathematics achievement were attained, O.E.E. compiled frequency distributions of the percentage of students meeting the objective criteria by 20-session attendance blocks for elementary and middle schools. These data, which are presented in Tables 6 and 7, indicated that, for reading, 42 percent of the elementary school students and 59 percent of the middle school students met the two-objective criterion; for math, the percentages were 41 percent and 49 percent, respectively. Overall 49.3 percent of all students mastered a minimum of two reading skills for every 20 sessions attended and 23.2 percent mastered four or more reading skills for each 20 sessions attended; for math, the values were 44.4 percent and 18.1 percent respectively. Accordingly, the program objectives were not met.

To determine the overall impact of Component 1.0 on student achievement, O.E.E. compiled a frequency distribution of total objectives mastered across all subject areas. (See Table 8.) Overall, the students for whom

Table 5

Percentage of Students Meeting Criteria for Career Education Objective by Attendance Blocks (Component 1.0)

Sessions Attended	Number of Students	Percent (Number) of Students: One Objective Per 20 Sessions	Three Objectives Per 20 Sessions
120 - 139	7	71.4 (5)	--[a]
100 - 119	41	78.0 (32)	--[a]
80 - 99	120	89.2 (107)	16.7 (20)
60 - 79	71	98.6 (70)	50.7 (36)
40 - 59	14	92.9 (13)	64.3 (9)
20 - 39	8	100.0 (8)	75.0 (6)
	261	90.0 (235/261)	33.3 (71/213)

[a]Because of the design of the data retrieval form, which provided for a maximum of 12 objectives, it was impossible for students attending over 100 sessions to meet the three-objectives-per-20-sessions criterion. Accordingly these students were not included in this analysis. Similarly, data for six students attending fewer than 20 sessions were not included in either analysis.

- Overall, 90 percent of the students mastered a minimum of one objective for every 20 sessions attended and over 33 percent of the students mastered three or more objectives for every 20 sessions attended. Accordingly, the program objective was partially attained.

Table 6

Percentage of Elementary and Middle School Students
Meeting Criteria for Reading Objective by Attendance Blocks
(Component 1.0)

	Elementary School			Middle School		
		Percent (Number) of Students			Percent (Number) of Students	
Sessions Attended	Number of Students	Two Objectives Per 20 Sessions	Four Objectives Per 20 Sessions	Number of Students	Two Objectives Per 20 Sessions	Four Objectives Per 20 Sessions
120 - 139	2	0.0	--[a]	9	33.3 (3)	--[a]
100 - 119	43	18.6 (8)	--[a]	35	40.0 (14)	--[a]
80 - 99	102	33.3 (34)	--[a]	67	65.7 (44)	--[a]
60 - 79	69	59.4 (41)	23.2 (16)	46	56.5 (26)	13.0 (6)
40 - 59	18	77.8 (14)	44.4 (8)	13	84.6 (11)	46.2 (1)
20 - 39	8	62.5 (5)	50.0 (4)	10	80.0 (8)	30.0 (3)
	242	42.1 (102/242)	29.5 (28/95)	180	58.9 (106/180)	14.5 (10/69)

[a]Because of the design of the data retrieval form, which provided for a maximum of 12 objectives, it was impossible for students attending over 80 sessions to meet the four-objectives-per-20-sessions criterion. Accordingly, these students were not included in this analysis. Similarly, data for 13 elementary and 17 middle school students attending fewer than 20 sessions were not included in either analysis.

- Forty-two percent of the elementary school and 59 percent of the middle school students met the two-objective criterion, values for the four-objective criterion were 29.5 and 14.5 percent respectively. Accordingly, the program objective was not attained.

Table 7

Percentage of Elementary and Middle School Students Meeting Criteria for Mathematics Objective by Attendance Blocks (Component 1.0)

	Elementary Schools			Middle Schools		
		Percent (Number) of Students			Percent (Number) of Students	
Sessions Attended	Number of Students	Two Objectives Per 20 Sessions	Four Objectives Per 20 Sessions	Number of Students	Two Objectives Per 20 Sessions	Four Objectives Per 20 Sessions
120 - 139	4	0.0	--[b]	12	0.0	--[b]
100 - 119	39	17.1 (7)	--[b]	30	40.0 (12)	--[b]
80 - 99	97	40.2 (39)	--[b]	63	50.8 (32)	--[b]
60 - 79	73	46.6 (34)	15.1 (11)	38	55.3 (21)	10.5 (4)
40 - 59	13	69.2 (9)	30.8 (4)	9	88.9 (8)	22.2 (2)
20 - 39	11	81.8 (9)	45.5 (5)	5	80.0 (4)	20.0 (1)
	237	41.4 (98/237)	20.6 (20/97)	157	49.0 (77/157)	13.5 (7/52)

[a]Because of the design of the data retrieval form, which provided for a maximum of 12 objectives, it was impossible for students attending over 80 sessions to meet the four-objectives-per-20-sessions criterion. Accordingly, these students were not included in this analysis. Similarly, data for eight elementary and 16 middle school students attending fewer than 20 sessions were not included in either analysis.

- Forty-one percent of the elementary school and 49 percent of the middle school students met the two-objective criterion, values for the four-objective criterion were 20.6 and 13.5 percent respectively. Accordingly, the program objective was not attained.

for whom individual achievement data were reported mastered an average of 12.5 skills (S.D. = 9.9) per student. Over 94 percent of the students mastered at least one new skill, and 50 percent mastered more than 11 new skills. Thus, students demonstrated gains across the four subject areas.

SUBCOMPONENT 2.1. CITYWIDE SERVICES INSTRUCTIONAL SUPPLIES AND EQUIPMENT

Activities

Subcomponent 2.1 provided 996 students in 70 D.S.E. special schools with instructional supplies, equipment, materials, and teacher training to supplement individualized instruction. Complete data retrieval forms were submitted for 892 students. This subcomponent was a continuation of a comparable subcomponent in 1982-83 which was successfully implemented. As in the previous cycle, the target population was heterogeneous, ranging in age from five to 21 years, and exhibited a variety of disabilities including limited self-awareness, inappropriate behavior, delayed cognitive and social development, severe physical impairments, and mild to severe language or communication disorders.

The students received basic instruction in 11 different D.S.E. programs; 31 percent were served by Track IV, 17 percent by Centers for Multiply Handicapped Children, 11 percent by Day Treatment Programs, 10 percent by the autistic program, and 10 percent by the Occupational Training Centers. The remainder (31 percent) were distributed among the other Citywide Services programs. Targeted curriculum areas were activities of daily living (A.D.L.), pre-vocational training, and communication and language development.

Table 8

Frequency Distribution of Total Objectives Mastered Across Instructional Areas for All Program Students (Component 1.0)

Number of Skills Mastered	Number of Students	Percent of Population	Cumulative Percent
31 - 36	56	7.5	7.5
26 - 30	51	6.8	14.3
21 - 25	56	7.5	21.8
16 - 20	75	10.0	31.8
11 - 15	113	15.0	46.8
6 - 10	194	25.8	72.6
1 - 5	162	21.6	94.2
0	44	5.9	100.1[a]
	751		

[a]Does not total 100 percent due to rounding.

- Over 94 percent of the students mastered at least one new skill, and nearly one-half mastered 11 or more. Accordingly, program students demonstrated substantial growth.

The program supported one special education teacher who was assigned in September, 1983 to coordinate the provision of program materials and equipment by screening materials orders to ensure that they met individual pupil needs and budget allocations. Two additional P.L. 89-313-supported teacher trainers were assigned in February, 1984 and provided in-class assistance, consultation services, and group workshops for classroom teachers at certain sites. This subcomponent also supported the Young Audience Program which provided music and dance presentations and student arts workshops to selected program sites throughout the city. Tax-levy funded personnel were responsible for the purchase and distribution of instructional materials. Over 86 percent of the students began the program during the fall term; almost all others began in either Feburary or March. At some schools, however, the program was only partially implemented due to incomplete eligibility lists and confirmations or partial delivery of instructional materials.

Program records indicated that the two new teacher trainers provided 163 hours of support to 211 classroom teachers serving 492 target students at 50 Citywide Program sites. Teacher trainers focused their service on eligible students in Track IV and Classes for the Emotionally Handicapped. Services were based upon a needs assessment and included development of long-term instructional goals, review of I.E.P. short-term objectives, and selection and use of program materials. These services were designed to enhance vocational, communication, and reading skills, and facilitate parent education. In addition, teacher trainers expedited the delivery of materials, helped resolve delays in installation of equipment (e.g., washing machines,

dishwashers, etc.) and assisted professional staff (e.g., occupational and physical therapists, speech-improvement teachers, etc.) in the use of complicated equipment and materials.

Materials/Equipment

Over 2,300 different items in 20 major categories were provided for target students. Classroom teachers reported participating in the selection of materials in nearly two-thirds of the cases, unit teachers or school principals reported providing input in over one-fourth of the cases, and in remaining cases teacher trainers or other school staff made the necessary selections.

On average, supplies from two or three categories were used with each pupil. Table 9 presents a frequency distribution of the categories of materials and equipment employed by the program. Classroom teachers reported that the following materials and equipment were most helpful: Attainment Kit, Bubble Bath Balls Module, Developmental Learning Materials kits, audio-visual equipment, button makers, clothes washers and dryers, laminating machines, motor education equipment, and photocopiers. The diversity of materials suggests that the program was again responsive to specific students needs.

Promising Activities

Subcomponent 2.1 was successfully implemented; program-purchased materials and equipment were appropriate for the students and supplemented their instructional program. All teachers interviewed ($N = 52$) noted improved pupil performance and behavior which they attributed to the program materials.

Table 9

Numbers and Relative Percentages of Materials/Equipment Purchased for Citywide Services (Subcomponent 2.1)

Categories	Number	Relative Percent[a]
Pre-vocational/Vocational Supplies	521	22.2
Audio-Visual Hardware	203	8.7
General Supplies	196	8.4
Appliances	191	8.2
Personal Hygiene Supplies	160	6.8
Office Machines and Equipment	159	6.8
Speech/Language Materials	138	5.9
Other Materials or Equipment	112	4.8
Perceptual Motor Materials	111	4.7
Sensory Development Materials	104	4.4
Arts and Crafts Materials	99	4.2
Physical Education Equipment	69	2.9
Math Materials	58	2.5
Records/Tapes	49	2.1
Ditto Masters	46	2.0
Guidance Materials	42	1.8
Reading Program Materials	41	1.8
Music/Dance Equipment	26	1.1
Social Studies Materials	10	0.4
Science Materials	7	0.3
	2,342	100.0

[a]Percentage of all materials/equipment.

- Twenty different categories of materials were purchased suggesting that the individual needs of students were carefully considered.

About two-thirds cited improvement in students' receptive or expressive language, one-half reported progress on pre-vocational skills, and one-fifth noted increases in attention span and following verbal directions. Teacher-trainer activities (e.g., individual conferences and group workshops) were particulary effective in offering classroom teachers instructional options and specific materials designed to meet the needs of target students. All principals interviewed (N = 12) cited the Young Audiences program as an innovative vehicle for learning and noted that classroom teachers integrated music and dance into their ongoing program. Overall, communication between program staff and classroom teachers contributed substantially to the smooth operation of the program.

Inhibiting Factors

The major problem in program implementation was the delay in the delivery of materials and equipment caused by a major reorganization within the Bureau of Supplies. Other factors which hampered program implementation were:

-- delayed assignment of teacher trainers resulting in reduced staff development activities;

-- difficulty some schools experienced in obtaining the installation of large appliances (e.g., dishwashers and washing machines); and

-- and inconsistent use of assessment instruments by a portion of the participating classroom teachers.

Achievement Data

To measure student growth in response to instruction supplemented by the program, the Behavioral Characteristics Progression (B.C.P.), Track IV

In-Depth Analysis, or the Career Education/Pre-Vocational Skills Assessment Inventory were administered on an ongoing basis. The criterion for attainment of the program's objective was mastery of at least three new skills by 80 percent of the students and six new skills by 50 percent of the students as measured by the above instruments either singly or in combination. To determine whether the objective was attained, a frequency distribution of total student mastery was prepared. These data, which are presented in Table 10, indicated that nearly 76 percent of the students mastered three new skills and 29 percent mastered at least six; accordingly the objective was not fully attained. However, interpretations of these findings must take account of the following.

- Fourteen percent of the students received truncated service (spring only) and could not be expected to fully achieve the program objective.
- Substantial student growth was evidenced; over 80 percent of all instructional objectives were attained (3,629/4,523) and students' average rate of mastery was 4.1 objectives (S.D. = 2.5).
- Student achievement data compared favorably with that of the previous cycle (1982-83); 76 percent of this years', compared to 54 percent of last year's students attained the program objective.
- Current student achievement exceeded the criterion of last year's objective (i.e., mastery of three objectives by 75 percent of the participating students).

An analysis of the short-term objectives indicated that most instruction covered either activities of daily living (43.8 percent) or pre-vocational skills (42.9 percent); language and communication accounted for 13.3 percent of the objectives; and the remaining 1.6 percent were uncategorized. This finding is consistent with the categories of materials purchased with program funds (see Table 9), supporting the hypothesis that the students'

Table 10

Frequency Distribution of Mastery of B.C.P., Track IV InDepth, and Career Education/Pre-Vocational Skills Objectives (Subcomponent 2.1)

Number of Skills Mastered	Number of Students	Percent of Population	Cumulative Percent
11 or more	15	1.7	1.7
10	15	1.7	3.4
9	17	1.9	5.3
8	27	3.0	8.3
7	21	2.4	10.7
6	162	18.2	28.9
5	99	11.1	40.0
4	85	9.5	49.5
3	236	26.5	76.0
2	81	9.1	85.1
1	98	11.0	96.1
0	36	4.0	100.1[a]
	892		

[a]Does not total 100 percent because of rounding.

- Seventy-six percent of the students mastered at least three new skills and 29 percent mastered six or more new skills. Accordingly, the objective was not fully attained.

educational program was appropriately supplemented by use of these materials.

SUBCOMPONENT 2.2. SERVICES FOR HEARING-HANDICAPPED STUDENTS

Activities

This subcomponent had three sections: Subcomponent 2.21 provided sign-language instruction, using a commercial multisensory videotape program, to 23 hearing-impaired students, ages 14 to 19, attending three high schools; Subcomponent 2.22 provided hearing amplification devices (Phonic Ear) to 12 severely hearing-impaired students, ages eight to 19; and Subcomponent 2.23 provided sign-language instruction using program-created videotapes to 19 students, ages 11 to 21, attending Junior High School 47 Manhattan (School for the Deaf). In all, Subcomponent 2.2 served 54 students.

Subcomponent 2.21 was fully implemented by at least one highly experienced tax-levy teacher at each site and offered a complete range of activities to target students. Materials were integrated with ongoing signing programs, although each school employed them in a different manner. At one site, the videotapes provided the core for the signing program; students viewed them on an almost daily basis and were required to master specific signs, upon which they were tested weekly. At a second site, the videotapes supported the language program; students viewed them for three 45-minute periods per week in resource-room or self-contained small-class groups and were required to demonstrate content mastery. At a third site, the videotapes were used for reinforcement; students viewed them either individually or in small groups for approximately 30 minutes per week in the resource room, during resource class, or study hall periods.

Subcomponent 2.22 provided each target student with the Phonic Ear amplification device and its accompanying frequency modulated (F.M.) transmitter, which were to be used by the students' classroom teachers. Students wore a small box-shaped instrument strapped to their chest and connected to a headphone set to receive their teacher's enhanced vocalizations. Upon the students' request, both general education and special education teachers wore the F.M. transmitters and microphones.

The implementation of Subcomponent 2.23 was substantially delayed. Due to administrative changes within the Bureau of Supplies, project equipment was received in late May, 1984. Nevertheless, a series of three sign-language videotapes were developed by tax-levy teachers and supervisors at Junior High School 47 Manhattan to provide instruction to their P.L. 89-313 eligible deaf/mentally retarded students. Videotape presentations were structured in the following manner: (1) a staff member demonstrated the sign for a target vocabulary word; (2) students presented the sign and used it appropriately; (3) a staff member reviewed the sign and/or activities presented. Tapes had captions and voice-overs when necessary and covered the following areas: elementary signs for educable and trainable mentally retarded students and self-care signs for trainable mentally retarded students.

Materials

Subcomponent 2.21 provided three videotape cassette players, three Joy of Signing instructional videotapes, and a sufficient quantity of

student workbooks designed for the program; Subcomponent 2.22 provided Phonic Ear transmitters and receivers to all participating sites; and Subcomponent 2.23 purchased a V.C.R. package, including a color camera, 13 and 19 inch color recorder/players, video title maker, caption recorder, video stabilizer/enhancer, tape editor, tuner-timer, wireless control, power adapter, dolly tripods, and a projector stand/cabinet.

Promising Activities

Subcomponent 2.21 provided effective supplementary instructional materials which assisted students in developing their communication skills. Specifically, the videotapes presented signs in a three-dimensional, animated format which facilitated student learning, standardized sign production, and encouraged increased interactions between and among students and staff.

O.E.E. interviews of elementary school staff and participating students indicated a favorable reaction to Subcomponent 2.22. All teachers indicated that target students consistently used the amplification device and that they felt comfortable in using the F.M. transmitter. General education teachers reported that they felt more effective in providing instruction since program students were able to hear more clearly and thus concentrate on their work. Teachers also reported that the transmitters facilitated communication between hearing-impaired students and their non-handicapped peers. In addition, at one site, the equipment was used during assembly programs so that target students could participate more fully in the school's activities.

Teachers also noted that target student behaviors changed over time in the following ways: increased attention in class, improved ability to

follow directions, more frequent answering and volunteering in class, increased social interactions with non-handicapped peers, increased student/teacher interactions, and a general increase in appropriate behaviors. Students reported that they could hear more clearly and enjoyed using the amplification device.

Subcomponent 2.23 was extremely successful; both staff and students were highly motivated and maintained their enthusiasm throughout the instructional videotape sessions. Students enjoyed using the tapes because they could see themselves and their friends performing on screen. Teachers reported that on-site videotape production was the best vehicle for individualizing instruction to meet the unique needs of eligible students.

Inhibiting Factors

There were no problems which notably affected the implementation of Subcomponent 2.21. Subcomponent 2.22 was not effective at the middle and high school levels; students refused to wear the amplification device indicating that they perceived it to be unflattering to their personal appearance. Teachers at those sites were disappointed by the students' resistance noting that the equipment would have been highly effective in maximizing available hearing and of benefit to their students. At the elementary school level, there were some problems in ensuring timely repairs of transmitters/receivers. Serious delays in equipment delivery hampered Subcomponent 2.3 Nevertheless, substantial benefits to students were observed by program staff.

Achievement Data

To measure growth in receptive sign comprehension for students served in Subcomponent 2.21, program staff in consultation with O.E.E. developed a 50-item assessment based upon a representative sample of signs contained in the videotape instructional material. The proposed criterion for attainment of the program objective was a statistically significant increase ($p < .05$) in test scores from pre- to posttesting.

To determine whether the objective was attained, a t test for matched scores was performed; complete data were reported for 19 students. Scores increased from a pretest mean of 48.1 (S.D. = 5.9) to a post- test mean of 49.3 (S.D. = 2.8), a mean gain (1.2) that was not statistically significant. However, an examination of student raw scores revealed that 14 of the 19 students attained perfect pre- and posttest scores. All of the remaining five students improved on the posttest, demonstrating a mean gain of 4.6 (S.D. = 5.1).

To demonstrate growth for pupils served by Subcomponent 2.22, two measures of student performance were proposed; in-class observations of student/teacher and peer/peer interactions were to be recorded and a receptive language pre- and posttest was to be administered (Peabody Picture Vocabulary Test). The criterion for attaining the program objective was a statistically significant increase ($p < .05$) in positive student interactions and receptive language test scores. Complete sets of data were available for only three pupils since middle and high school students refused to participate and some elementary school students were unavailable during parts of the assessment process. Although insufficient test data precluded the proposed statistical

Table 11

Frequency Distribution of Number
of Track IV InDepth Objectives Mastered
(Subcomponent 2.23)

Number of Skills Mastered	Number of Students	Percent of Population	Cumulative Percent
3	1	5.3	5.3
2	7	36.8	42.1
1	10	52.6	94.7
0	1	5.3	100.0
	19		

- Over 94 percent of the students mastered at least one new skill as measured by the Track IV InDepth Analysis; nearly one-half mastered two or more skills. Based upon the adjusted expected achievement level, the program objective was attained.

analysis, an inspection of the raw scores from the observations of peer/peer interactions revealed a 24 percent increase in appropriate behaviors. Although this suggests substantial improvement for some elementary students, the findings are inconclusive.

To measure communication/language achievement for pupils served by Subcomponent 2.23, teachers performed ongoing assessments using the Track IV In-Depth Analysis. Instructional objectives included expressive communication using sign language (i.e., demonstrating eating, foods, and specific locations) and receptive comprehension of signed information (i.e., commands, objects, requests, and routines). The proposed criterion for attaining the program objective was mastery of three skills by 80 percent of the students and five skills by 50 percent of the students. However, since program implementation was limited to less than 20 percent of the school year, the expected achievement level was adjusted as follows: 80 percent of the students will master a minimum of one new skill as a result of program participation.

To determine whether the objective was attained, frequency distributions of student mastery were prepared. These data, which are presented in Table 11, indicated that 95 percent of the students mastered at least one new skill, and over 40 percent mastered two or more skills. Accordingly, the modified objective was attained.

SUBCOMPONENT 3.1 HIGH SCHOOL OUTREACH PROGRAM FOR HANDICAPPED STUDENTS

Activities

The purpose of this subcomponent was twofold: first, to improve the attendance of those eligible students who demonstrated a history of excessive absence (i.e., percentage attendance below 75 percent) or truancy; and

second, to provide course support in career education for eligible students with satisfactory attendance records (i.e., percentage attendance at or above 75 percent.) A tax-levy citywide coordinator directed five staff members (one for each high school region), who were designated career education teacher trainers and provided a variety of direct and indirect services to accomplish the aims of this program.

The trainers served a total of 231 students in 75 high schools; 84 received aid to improve attendance; 147 received career education course support. Staff caseloads varied widely. Table 12 presents a breakdown of the number of students served in each region. Although one teacher trainer served each region, the Queens region served at least 55 percent more students than any other region.

Program start-up dates varied considerably among the regions, ranging from mid-October to early December. Following orientation meetings with the program coordinator, the teacher trainers visited their respective schools to ascertain individual student needs and plan intervention strategies.

Teacher trainers employed a variety of strategies to promote improved attendance, including the following: direct student counseling; conferences with teachers, parents, and school administrators; referral to guidance counselors and school-based support teams; and home visits. In some cases teacher trainers assessed the intrinsic interests and goals of individual students and modified their instructional programs accordingly. Other motivational techniques to increase interest and participation in school activities included organizing intramural teams for special education students and arranging rock concerts. More direct methods of encouraging

Table 12

Number of Schools and Students Served by
P.L. 89-313 High School Outreach Program, by Borough, 1983-84

Borough	Number of Schools	Number of Students
Bronx	12	39
Brooklyn Basis	13	33
Brooklyn	15	35
Manhattan	12	45
Queens	23	79
	75	231

- The Queens teacher trainer's caseload was substantially larger than any other.

attendance included telephone calls to habitually tardy students and regular home visits to pick-up truants and accompany them to school.

Typical course-support activities included the following: discussing individual student needs and aptitudes with career-education course teachers; providing appropriate instructional materials; facilitating appropriate changes in students' instructional programs; modeling alternative strategies for instruction and classroom management; and direct student counseling and assistance with homework and classwork. Other activities to promote the development of occupational skills included job development, referral for job training, and presentations at parent education workshops. In addition, one teacher trainer produced a resource guide of career education programs for high schools.

Promising Activities

Staff interviews supported by an analysis of teacher-assigned grades (see section on achievement data) indicate that the course-support activities facilitated effective participation of target students in high school career-education programs. In addition to assisting target students to successfully complete career education courses, teacher-trainer support encouraged them to participate in extra-curricular and community activities that further developed their social and occupational skills. Teacher trainers were also instrumental in arranging after-school and summer job placements to provide actual on-the-job experience. Finally, teacher-trainer presentations at parent workshops and individual parent conferences provided parents with the support and knowledge to participate in the educational process and take advantage of available community resources.

Inhibiting Factors

The intensity of services was limited by the size of the caseloads and the wide distribution of the population. This problem was intensified in Queens where the teacher trainer served 73 students in 23 schools. The stubborn nature of problems of truancy and attendance for the high school population in general should be noted.

While the program was serving all students by December or January of the program year, the students with the most difficult problems might have benefited from a longer and more intensive period of service. Two additional inhibiting factors were limited funds for career education materials and equipment and crowded schedules of students, classroom teachers, and teacher trainers which hampered conference planning.

Achievement Data

To measure the effects of teacher-trainer support upon target student attendance (Objective 3.11), mean pre- and post-intervention attendance rates were compared through a *t* test for correlated data. Eligible students were potential drop outs who were present in school less than 75 percent of the time (the minimum requirement for passing high school courses). The criterion for attainment of this objective was a statistically significant increase ($p < .05$) in the mean attendance rate for these students.

Complete data sets were available for 73 of the 84 students directly served. Mean percentage attendance decreased from a pre-program mean of 37 percent (*S.D.* = 28.6) to a post-program mean of 31.3 percent (*S.D.* = 33.6), a decline of 5.7 percent. Accordingly, the objective was not attained.

To measure the effects of teacher trainer support upon student achievement

(Objective 3.12), the final course grade for each supported subject was recorded for the fall and spring terms on a pass/fail basis. The criterion for attainment of the objective was achievement of a passing grade for a minimum of 80 percent of the students who maintained an attendance rate of 75 percent or better. To determine whether the objective was attained, a frequency distribution of course grades was constructed; complete data for 137 students in the fall term and 148 students in the spring term were reported. These data, which are presented in Table 13, indicated an overall passing rate of 86 percent; the passing rates by semester were 80 percent for Fall and 92 percent for Spring. Accordingly, students exceeded the program criterion and the objective was fully attained.

SUBCOMPONENT 3.2. PLACEMENT AND REFERRAL CENTER FOR THE HANDICAPPED

Activities

This subcomponent, which was a continuation of the successful Placement and Referral Center Subcomponent of the 1982-83 program, provided pre-vocational training and career education to 35 handicapped high school students, 14 of whom also received supplemental, supervised work experience at 16 job sites throughout New York City. The students, who ranged in age from 16 to 20 years, attended 23 high schools; three- fifths (N = 21) were classified as learning disabled, 13 were emotionally handicapped, and one was mentally retarded.

One teacher coordinator, assisted by a tax-levy Training Opportunity Program (TOP) teacher, provided the following services: interviewed eligible students referred by the high school borough coordinators (funded under Subcomponent 3.1); assessed vocational aptitudes; briefed parents; communi-

cated with target students' high school teachers; provided pre-vocational and career education (Adkins Life Skills Program) training; placed and supervised students in the Work Experience Program; and maintained contact with employers, outside agencies, and group homes. The half-day pre-program staff meeting was held with the director of the Placement and Referral Center which covered all relevant aspects of program implementation, including staff responsibilities, curriculum, referral process, student recruitment, and parent education.

The TOP-supervised work-experience program began in September, 1983 with interviews of 23 students; selection criteria were good school attendance and positive work attitudes. In addition, students with prior work experiences were preferred.

Nineteen students were chosen for this program and received an orientation which covered work assignments, payroll schedules, half-fare transportation applications, key phone numbers, and training workshop schedules. Students were placed at 14 locations in positions of clerk, stockroom aide, food service aide, hospital aide, maintenance aide, school aide, and graphics trainee. They earned a tax-levy-funded stipend of $3.35 per hour, the minimum wage, for two or three hours per day after school.

During the school year, students attended workshops which emphasized the importance of positive work habits and attitudes, and covered general employment-related issues such as completing job applications, reading and interpreting classified employment ads, preparing for and being interviewed, and communication skills. Interviewing skills were stressed through video-taped mock interviews which formed the basis for developing more effective

Table 13

Frequency Distribution of Number of Courses Passed in Subjects Supported by Teacher Trainers (Subcomponent 3.1)

Semester	Number of Students Served	Number of Students Passing	Percent of Total Passing
Fall	137	109	80
Spring	148[a]	136[b]	92
Total	285[b]	245[b]	86

[a]Duplicated count since it includes some students who were supported in courses during the Fall semester.

[b]Duplicated count of students; unduplicated count of courses.

- Students passed 86 percent of the courses in which they received teacher-trainer support. Thus, the objective was attained.

interview behavior. In addition, the workshops provided information about pay schedules, method of payment, transportation, and procedures for contacting program staff. Each student also periodically received counseling by the teacher coordinator at the Placement and Training Center. Exit interviews were conducted in June for all students.

Pre-vocational training and career education services began in 1984 after the identification and screening of potential participants. Criteria for selection included eligibility for P.L. 89-313 funding, need for training, availability and willingness to participate, teacher recommendations, ability to travel independently, demonstrated maturity and social skills, and attendance. The implementation of Clerical Skills Training and the Adkins Life Skills Program began in March, 1984 due to a delay in assigning Borough High School Coordinators who were responsible for referring students. At that time, students attended orientation meetings, completed social security applications, and submitted signed parent consent forms. All students were assessed by the teacher-coordinator using the San Francisco Vocational Competency Test (S.F.V.C.), a series of clerical tests, and the Apticom and Metro Guide, which were used with the Adkins' Life Skills program.

Students attended two-hour training sessions twice a week at the Placement and Referral Center. Two series were provided: one in office skills and one in career experience. The teacher-coordinator instructed two groups of five to ten students on mailroom/messenger skills and the use of office equipment (copier, postage meter, addressograph, and hand embosser). In addition, the teacher coordinator conducted the career education program

over a nine-week period and focussed on job interview training using pre-recorded films, program developed videotapes, and mock interviews.

Program staff maintained contact with the students' schools, notifying classroom teachers about program schedules and student attendance. A year-end report was provided for each student, including S.F.V.C. ratings, Adkins Life Skills interview ratings, office skills acquired, and information about students participating in the TOP summer work component.

Individual folders were maintained for each student, which contained year-end summaries, initial interview forms, case notes, attendance records, parental permission statements, student referral profiles, working papers, correspondence, and, for work experience students, the TOP evaluation.

Materials/Equipment

Students received personal data sheets, half-fare transportation applications, job interview practice blanks, and a work orientation booklet entitled Getting It Together. Certificates signifying successful completion of the program were presented to all participants at the conclusion of the project. Principals and teachers received copies of all relevant materials along with the Center brochure.

Home Involvement

The teacher coordinator maintained contact with families throughout the year. New students were interviewed with their parents and all students needed signed parental consent forms. Parents received a program Fact Sheet at the orientation; at the conclusion of the program they were given a year-end summary of student activities including an overview of the training they had completed and summaries of test results.

Promising Activities

This subcomponent provided handicapped high school students with the opportunity to learn clerical skills, develop an awareness of their interests and abilities, become familiar with the requirements and routines of the workplace and, for some, receive realistic supervised work experiences. The Adkins Life Skills Program was seen by program staff as particularly effective and highly motivating to students.

Observations and interviews of work experience students and their work-site supervisors indicated that this component was quite successful. There were no job terminations. Students were seen performing their work conscientiously and correctly and relating well to their co-workers and supervisors. Supervisors were unanimous in their praise of the quality of students' work. Some of the work behaviors cited by employers were dependability, ability to work well independently, punctuality, following directions, learning quickly, and performing tasks well. One student, working in a hospital storeroom, was accepted by the hospital union after his supervisor submitted a request for his full-time employment. All students who applied for the TOP Summer Component were hired.

Both students receiving supervised work experience and and those participating in pre-vocational training were pleased with the program. Students interviewed at their work sites ($N = 5$) indicated that they wished to continue working in their current jobs and felt that they were currently better at the job than when they first started. This was confirmed by the positive evaluation reports received by the teacher coordinator from TOP staff who indicated that students were developing appropriate work-related

skills, behaviors, and attitudes.

All skills-training students interviewed (N = 9) indicated that they enjoyed the Adkins experiences and thought it helped them overcome some of their fears about job interviews and strengthened their interviewing skills. Most also liked the office training aspect of the program and found it quite helpful.

Inhibiting Factors

Delays in student referrals resulted in late program implementation for the work experience group and truncated offices skills practicum. In addition, the office practices curriculum was similar to those already available at local high schools. Therefore, participation in this subcomponent was less attractive to eligible students and the subcomponent was unable to serve the proposed number of students.

Achievement Data

To measure student development of general job skills in response to training (Objective 3.21), students were rated by their site supervisors or program staff on the S.F.V.C. at the beginning and end of program participation. This assessment consists of 30 items which measure job-appropriate behaviors such as punctuality, initiative, ability to read and follow directions, and response to criticism. The criterion for attainment of this objective was a statistically significant ($p < .05$) increase in scores. To determine whether the objective was attained, a t test for correlated means was applied to the data; complete data were reported for 25 students. Scores increased from a mean of 79.1 (S.D. = 19.6) to a mean of 89.4 (S.D. = 16.4), a gain (10.3) that was statistically significant ($t = 5.81$, $df = 24$,

$p < .01$). Accordingly, the objective was met.

To measure students' mastery of job interviewing skills as a result of program participation (Objective 3.22), the Adkins' Life Skills Interview Rating Sheet was administered to the students at the beginning and the end of the program. This scale consists of 19 questions frequently asked on job interviews and ratings of the quality of responses. Preand posttest scores were available for 28 students. The criterion for attainment of this objective was mastery of at least two skills by all participants. To determine whether the objective was met, a frequency distribution of student mastery was prepared. These data, which are presented in Table 14, indicated that all students mastered two or more skills and over one-half mastered five or more. The mean number of skills mastered was 5.2 (S.D. = 2.4) and the median was five. Accordingly, students exceeded program expectations and the objective was fully attained.

Table 14

Frequency Distribution of
Mastery of Job Interviewing Skills as
Measured by the Adkins Life Skills Interview Rating Scale
(Subcomponent 3.2)

Number of Skills Mastered	Number of Students	Percent of Population[a]	Cumulative Percent
11	1	3.6	3.6
9	2	7.1	10.7
8	2	7.1	17.8
7	3	10.7	28.5
6	3	10.7	39.2
5	4	14.3	53.5
4	5	17.9	71.4
3	5	17.9	89.3
2	3	10.7	100.0
	28		

[a]Percent of students who received interview skills training.

- All students demonstrated mastery of at least two job interviewing skills; over 53 percent mastered five or more. Accordingly, the objective was fully attained.

IV. CONCLUSIONS AND RECOMMENDATIONS

Analysis of the data gathered to evaluate the P.L. 89-313 components and subcomponents indicated that attainment of program objectives varied; some were met, most were partially met, and a few were unmet. However, nearly all of the 2,091 students served by the program demonstrated growth in at least one of the following: communication, reading, mathematics, sensory and motor development, self-help and societal/community living skills, and vocational competencies. More than 78 percent of all instructed skills were mastered by eligible pupils and the average number of skills mastered per student was 7.8. Observations and interviews indicated that, for the most part, program services met the individual needs of the students and effectively supplemented basic instructional activities.

In comparison with the 1982-83 cycle, the 1983-84 program served approximately twice as many students and provided two and one-half times more supplementary materials and equipment. Approximately the same number of staff were involved in both cycles. In keeping with recommendations from the evaluation of the previous cycle, most of these were teacher trainers whose primary responsibilities were to provide consultations, in-class demonstrations, and workshops in the selection and effective use of program-purchased materials and equipment for individualization of instruction.

Four of the components and subcomponents of the 1982-83 program cycle were replicated during 1983-84, allowing some direct comparisons between cycles. Component 1.0, Regional Instructional Support Unit, served 776 students in the current cycle, nearly twice the number served last year.

This year, the component increased its emphasis on career education and broadened its focus on academics. Overall, mean student mastery more than quadrupled from 3.1 skills per student last year to 12.1 this year.

Subcomponent 2.1, Citywide Services Instructional Supplies and Equipment, served almost twice as many students as last year and provided almost two and one-half times the amount of materials. Special emphasis was given to vocational equipment (i.e., appliances and office machines). As in the previous cycle, this year's program only partially attained its objective; however, mean number of objectives mastered increased from an average of 2.7 in 1982-83 to an average of 4.1 in the current year.

The current replication of Subcomponent 2.22 differed from the previous cycle by expanding the use of amplification devices to general education, as well as special education, classrooms. Although effective at the elementary level in both cycles, the current program encountered strong student resistance at the middle and high school level.

Finally, Subcomponent 3.2., Placement and Referral Center for the Handicapped, was a replication of a highly effective program component. As in the past, this subcomponent provided supervised work experience and pre-vocational skills training and has continued to exceed its pupil achievement objective.

All components and subcomponents suffered some delays in implementation. In addition, although program-eligible students were identified before the beginning of the program cycle, high student transiency hampered efforts to locate and serve some students.

The conclusions drawn from the findings of this evaluation lead to the following recommendations:

- To ensure that services are provided in a timely manner, efforts should continue to gain early program approval and delivery of supplies.
- To ensure rapport with school staff, disseminate information, and optimize implementation, the program should continue to strengthen field contacts and site visits.
- To ensure the best match between student needs and program services, program coordinators and teacher trainers should continue to request input from school-based personnel.
- Where the focus of program activities is on providing supplementary materials or equipment, efforts to involve parents and elicit pupil attitudes and interests should be expanded.
- Efforts should be strengthened to maintain and increase high school students' attendance. When possible, teacher-trainer caseloads should be equalized and reduced to a more manageable level. In addition, greater parent involvement should also be encouraged.